United States Court of Appeals for the Federal Circuit

(Serial No. 10/798,505)

IN RE KEISUKE AOYAMA, KOJIRO TOYOSHIMA, AND YOSHITAKA EZAKI

2010-1552

Appeal from the United States Patent and Trademark Office, Board of Patent Appeals and Interferences.

Decided: August 29, 2011

CHRISTOPHER J. ROURK, Jackson Walker, L.L.P., of Dallas, Texas, argued for the appellant.

THOMAS W. KRAUSE, Associate Solicitor, United States Patent and Trademark Office, of Alexandria, Virginia, argued for the appellee. With him on the brief were RAYMOND T. CHEN, Solicitor, and SCOTT C. WEIDENFELLER, Associate Solicitor.

Before NEWMAN, GAJARSA*, and LINN, *Circuit Judges*.

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* Judge Gajarsa assumed senior status on July 31, 2011.

Opinion for the court filed by *Circuit Judge* LINN.

Dissenting opinion filed by *Circuit Judge* NEWMAN.

LINN, *Circuit Judge*.

Mitsui Bussan Logistics, Inc. ("Mitsui") is the assignee of U.S. Patent Application No. 10/798,505 titled "System and Method for Distribution Chain Management" and appeals the affirmance by the Board of Patent Appeals and Interferences ("Board") of the examiner's rejection of claims 11 and 21 as anticipated by U.S. Patent Application Pub. 2001/0034673 to Yang *et al.* ("Yang"). Because the Board erred in construing the means-plus-function limitation of claims 11 and 21 and because there is no permissible construction, this court affirms the rejection of claims 11 and 21 on the alternative ground of failure to satisfy the definiteness requirement of 35 U.S.C. § 112 ¶ 2 and remands with instructions to afford Mitsui the same protections under 37 C.F.R. § 41.50(b) as it would have enjoyed had the Board made the proper rejection in the first instance.

I. BACKGROUND

Independent claims 11 and 21 are pending and on appeal. Claim 11 recites (disputed limitation emphasized):

> 11. A system for supply chain management comprising:
>
> an order controller system including *reverse logistics means for generating transfer data*; and
>
> a warehouse system receiving the transfer data and generating shipping data.

Claim 21 similarly contains the "reverse logistics means for . . . generating transfer data" limitation of claim 11.

The examiner construed the "reverse logistics means for generating transfer data" limitation as a means-plus-function limitation. The examiner concluded that "[t]he structure corresponding to the reverse logistics means for transferring is a computer implemented with software." Based on this construction, the examiner rejected claims 11 and 21 based upon the disclosure in Yang because

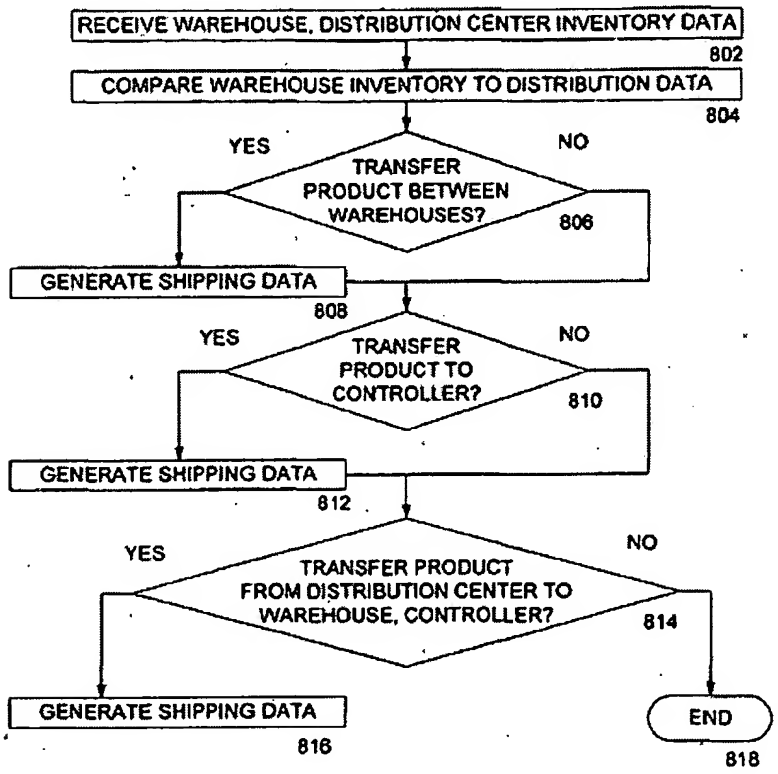

FIGURE 8 800

Yang discloses "any working computer."

On appeal to the Board, Mitsui challenged the examiner's anticipation rejection by attacking the examiner's construction of "reverse logistics means." In particular,

Mitsui contended that Figure 8, shown below, and the accompanying description in paragraphs [0088]–[0093] disclose the corresponding structure for the means-plus-function limitation.

The Board disagreed. It analyzed Figure 8 and the accompanying description and instead found "[t]here is no structure or algorithm for generating transfer data disclosed in the discussion of Figure 8 at Specification paragraphs[] 0088-93." *Ex parte Aoyama*, No. 2009-6755, slip op. at 12 (B.P.A.I. Nov. 17, 2009) ("*Initial Decision*"). Unable to find structure in Figure 8 and the accompanying description, the Board scoured the specification for any implied structure that could even arguably generate transfer data. *Id.* The Board, in giving "generating transfer data" a broad construction, focused on the application's disclosure of generating shipping data. The Board therefore concluded that the structure for generating transfer data was "open ended" and could be generated by order controller systems, warehouse systems, and distribution systems based upon order data, order allocation data to warehouses, inventory data, and other suitable data. *Id.* Under this construction, the Board affirmed the examiner's rejection of claims 11 and 21 over Yang because "[o]ne of ordinary skill knew that any inventory management system that tracked parts at various locations had to document transfers or shipments among locations." *Id.* at 15-16. Mitsui filed a timely appeal, and this court has jurisdiction under 28 U.S.C. § 1295(a)(4)(A).

II. DISCUSSION

A. Standard of Review

Determining whether claims are anticipated involves a two-step analysis. The first step involves construction of the claims of the patent at issue. Claim construction is

a question of law reviewed *de novo*. *In re Bigio*, 381 F.3d 1320, 1324 (Fed. Cir. 2004) (citing *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1454 (Fed. Cir. 1998) (en banc)). Similarly, "[d]etermining the claimed function and the corresponding structure for a claim limitation written in means-plus-function format are both matters of claim construction . . . . present[ing] issues of law that we review *de novo*." *WMS Gaming Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1347 (Fed. Cir. 1999) (citation omitted). The second step involves comparing the claims to the prior art. Anticipation is a question of fact reviewed for substantial evidence. *In re Hyatt*, 211 F.3d 1367, 1371-72 (Fed. Cir. 2000).

B. Claim Construction

i. The Means-Plus-Function Limitation

Mitsui argues that the Board erred in construing the means-plus-function limitation "reverse logistics means for generating transfer data." According to Mitsui, the specification and the prosecution history clearly link the function of the reverse logistics means for generating transfer data of claims 11 and 21 to the flowchart algorithm of Figure 8. *Appellant's Br.* 17. Mitsui contends that by giving the terms of the means-plus-function limitation the "broadest reasonable interpretation" and ignoring the structure disclosed in Figure 8, the Board's construction failed to comply with this court's guidance in *In re Donaldson Co.*, 16 F.3d 1189 (Fed. Cir. 1994), and *WMS Gaming*.

The United States Patent and Trademark Office ("Office") responds that the Board properly gave the means-plus-function limitation its broadest reasonable construction, consistent with *Donaldson*. 16 F.3d at 1194. The Office contends that because "transfer data" was not defined in the specification, the Board properly construed

it in a manner consistent with its plain meaning. This definition, according to the Board, encompassed "shipping data," which is disclosed in the specification. The Office concludes that the Board properly identified the only implied structure disclosed in the specification that performs the function of generating shipping data. This structure is "a system for supply chain management that includes order controller, warehouse and distributions systems." *Ex parte Aoyama*, No. 2009-6755, slip op. at 5 (B.P.A.I. June 16, 2010) ("*Decision on Rehearing*").

"The first step in construing a means-plus-function claim limitation is to define the particular function of the claim limitation." *Golight, Inc. v. Wal-Mart Stores, Inc.*, 355 F.3d 1327, 1333 (Fed. Cir. 2004) (citation omitted). "The court must construe the function of a means-plus-function limitation to include the limitations contained in the claim language, and only those limitations." *Cardiac Pacemakers, Inc. v. St. Jude Med., Inc.*, 296 F.3d 1106, 1113 (Fed. Cir. 2002). Here, both parties agree that the identified function of the limitation of claims 11 and 21 at issue is "generating transfer data."

"The next step in construing a means-plus-function claim limitation is to look to the specification and identify the corresponding structure for that function." *Golight*, 355 F.3d at 1334. "Under this second step, structure disclosed in the specification is corresponding structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim." *Med. Instrumentation & Diagnostics Corp. v. Elekta AB*, 344 F.3d 1205, 1210 (Fed. Cir. 2003) (internal citation and quotation omitted).

While claims are still to be given their "broadest reasonable interpretation" during prosecution, "the broadest reasonable interpretation that an examiner may give means-plus-function language is that statutorily man-

dated in paragraph six." *Donaldson*, 16 F.3d at 1194-95. In *Donaldson*, this court explained that "the [Office] may not disregard the structure disclosed in the specification corresponding to such language when rendering a patentability determination." *Id.* at 1195. Moreover, when the disclosed structure is a computer programmed to carry out an algorithm, "the disclosed structure is not the general purpose computer, but rather the special purpose computer programmed to perform the disclosed algorithm." *WMS Gaming*, 184 F.3d at 1349 (citing *In re Alappat*, 33 F.3d 1526, 1545 (Fed. Cir. 1994) (en banc)).

This court agrees with Mitsui that the specification and the prosecution history clearly link the function of the "reverse logistics means for generating transfer data" of claims 11 and 21 to the flowchart of Figure 8. The Board also recognized some link between the means-plus-function limitation and Figure 8. However, after analyzing Figure 8 and finding insufficient structure disclosed, the Office first expanded its construction of "transfer data" to include "shipping data" and then identified the structure that generates "shipping data." *Initial Decision* at 6, 15-16. This was improper. The Board erred by identifying structure that was not clearly linked or associated by the specification or prosecution history with the function actually recited in the claim, i.e., "generating transfer data." *See Med. Instrumentation*, 344 F.3d at 1210. The only portion of the specification linked to that function, and the only portion of the specification that Mitsui contends describes the corresponding structure, is the flowchart of Figure 8 and the description thereof in the specification.

ii. Sufficiency of Disclosure

Mitsui contends that the Board's determination that Figure 8 does not contain sufficient structure to support the limitation "amounts to official notice . . . that a flow

chart algorithm can never provide the algorithmic structure for a means plus function element." *Appellant's Br.* 20. The Office responds that just because a computer program may be described by a flowchart or algorithm does not mean that every flowchart or algorithm necessarily describes sufficient structure. *Appellee's Br.* 17-18.

For means-plus-function limitations where the disclosed structure is a computer programmed to implement an algorithm, the patent must disclose enough of an algorithm to provide the necessary structure under 35 U.S.C. § 112 ¶ 6. *See Finisar Corp. v. DirecTV Grp., Inc.*, 523 F.3d 1323, 1340 (Fed. Cir. 2008). The patentee may express this algorithm in any understandable manner, including as a flowchart, so long as sufficient structure is disclosed. *Id; see, e.g., AllVoice Computing PLC v. Nuance Commc'ns, Inc.*, 504 F.3d 1236, 1245 (Fed. Cir. 2007). "This court does not impose a lofty standard in its indefiniteness cases." *Finisar*, 523 F.3d at 1341. Sufficient structure must simply "permit one of ordinary skill in the art to know and understand what structure corresponds to the means limitation" so that he may "perceive the bounds of the invention." *Id.* at 1340-41.

Here, the Board determined that "[t]here is no structure or algorithm for generating transfer data disclosed in the discussion of Figure 8 at Specification paragraphs[] 0088-93. These paragraphs do discuss generating shipping data, but again without disclosing any structure or algorithm for doing so." *Initial Decision* at 6. This court agrees.

The Board did not purport to announce that a flowchart can never, under any circumstances, provide sufficient structure to satisfy § 112 ¶ 6. To do so would flatly contradict this court's precedent. *See, e.g., Finisar*, 523 F.3d at 1340; *AllVoice*, 504 F.3d at 1245. Instead, the Board simply concluded that the particular flowchart of

Figure 8 and its accompanying description fail to provide any structure or algorithm whatsoever. The Board properly recognized that while Figure 8 provides a high level process flow, "it does not describe any structure." *Decision on Rehearing* at 4.

This court agrees with the Board's conclusion that Figure 8 "fails to describe, even at a high level, how a computer could be programmed to produce the structure that provides the results described in the boxes." *Id.* at 4-5. Moreover, the Board's finding is consistent with the Examiner's finding. The Examiner recited that "[t]he proper test for meeting the definiteness requirement is that the corresponding structure . . . of a [mean-plus-function] limitation must be disclosed in the specification itself in a way that one skilled in the art will understand what structure . . . will perform the recited function." Examiner's Answer of April 23, 2007, at 10-11. After analyzing Figure 8 and its accompanying description, the Examiner was unable to find any structure disclosed that performed the claimed function. *Id.* Figure 8 only "presents several results to be obtained, without describing how to achieve those results, and certainly not how to generate transfer data." *Decision on Rehearing* at 5. The Board, in analyzing the only portion of the specification identified by the applicant as providing structure for the claimed function, was unable to find any disclosure, let alone sufficient disclosure to inform a person of ordinary skill how to program a computer to perform the stated function. Mitsui has failed to establish any error in the Board's findings on this issue.

C. Indefiniteness

Because the means-plus-function limitation of claims 11 and 21 lacked sufficient disclosure of structure under 35 U.S.C. § 112 ¶ 6, these claims are unpatentable as indefinite under 35 U.S.C. § 112 ¶ 2. *Aristocrat Techs.*

Austl. PTY Ltd. v. Int'l Game Tech., 521 F.3d 1328, 1337-38 (Fed. Cir. 2008). Moreover, because "a claim cannot be both indefinite and anticipated," *Enzo Biochem, Inc. v. Applera Corp.*, 599 F.3d 1325, 1332 (Fed. Cir. 2010), this court does not reach the ground relied on by the Board—that claims 11 and 21 are unpatentable as anticipated in view of Yang. *Id.* ("If a claim is indefinite, the claim, by definition, cannot be construed. Without a discernable claim construction, an anticipation analysis cannot be performed.").

Mitsui contends that if this court were to affirm the Board's rejection of claims 11 and 21 on an alternative basis, such as indefiniteness, this court would run afoul of *Securities & Exchange Commission v. Chenery Corporation*, 318 U.S. 80 (1943). Mitsui contends that under *Chenery*, this court may only review the grounds upon which the Board based its determination. *Chenery* does not stand for so broad a proposition.

As explained by this court in *In re Comiskey*, 554 F.3d 967, 974 (Fed. Cir. 2009), "some of our cases have concluded that it is inappropriate for this court to consider rejections that had not been considered by or relied upon by the Board." *Id.* (citations omitted). These cases, however, "referred to situations that required factual determinations not made by the agency." *Id.* (citations omitted). *Chenery* itself made clear that it did not "disturb the settled rule that, in reviewing the decision of a lower court, it must be affirmed if the result is correct although the lower court relied upon a wrong ground or gave a wrong reason." *Chenery*, 318 U.S. at 88 (citation and quotation omitted). This is in part due to judicial economy because "[i]t would be wasteful to send a case back to a lower court to reinstate a decision which it had already made but which the appellate court concluded should properly be based on another ground *within the power of the appellate court to formulate.*" *Id.* (emphasis

added). *Chenery* concluded that similar considerations governed the review of administrative orders. *Id.* As this court has long recognized, and repeated again in *Comiskey*, "we may, however, where appropriate, affirm the agency on grounds other than those relied upon in rendering its decision, when upholding the agency's decision does not depend upon making a determination of fact not previously made by the agency." *Comiskey*, 554 F.3d at 974 (quoting *Killip v. Office of Pers. Mgmt.*, 991 F.2d 1564, 1568-69 (Fed. Cir. 1993)).

It is well established that "[a] determination of claim indefiniteness is a legal conclusion that is drawn from the court's performance of its duty as the construer of patent claims." *Personalized Media Commc'ns, L.L.C. v. Int'l Trade Comm'n*, 161 F.3d 696, 705 (Fed. Cir. 1998). As a legal question, failure to satisfy the definiteness requirement of 35 U.S.C. § 112 ¶ 2 is a "ground [for affirmance] within the power of the appellate court to formulate." *Chenery*, 318 U.S. at 88. In *Comiskey*, the Board rejected the applicant's claims on the basis of obviousness. *Comiskey*, 554 F.3d at 972-73. On appeal, this court instead affirmed the Board's rejection as to some claims on the alternative ground of failure to claim statutory subject matter under 35 U.S.C. § 101. *Cf. Comiskey*, 554 F.3d at 975, 981-82 (holding that lack of statutory subject matter, a legal question, is a permissible alternative ground for affirmance of the Board). Similarly, here, this court may affirm the Board's rejection of claims 11 and 21 on the alternative legal basis that the claims fail to satisfy 35 U.S.C. § 112 ¶ 2.

The decision of our predecessor, in *In re Fleissner*, 264 F.2d 897 (CCPA 1959), reached the opposite conclusion in a slightly different factual context. The Board in *Fleissner* rejected the applicant's claims, containing a means-plus-function limitation, as anticipated in view of a prior art reference. *Id.* at 898. On appeal, the Office sought to

have our predecessor affirm the rejection of the claims on the basis that the means-plus-function limitation lacked a corresponding structure in the specification. *Id.* at 900. Thus, the Office sought the same result as this court now adopts in this case. Our predecessor, however, was not convinced. In response to the Office's argument, our predecessor noted that "[t]here was . . . no rejection of the claims on appeal as failing to particularly point out and distinctly claim the alleged invention, but rather only a rejection predicated on the [prior art] as an anticipation." *Id.* Our predecessor concluded that "[t]o reject the claims as indefinite, we would be compelled to raise a ground of rejection not of record, and thus act beyond our statutory authority." *Id.*

Fleissner is distinguishable on at least two grounds. First, as recognized by this court in *Comiskey*, while claim construction and indefiniteness are now recognized as legal questions, it "was not at the time seen as legal in nature." *Comiskey*, 554 F.3d 975 n.5 (discussing *Fleissner*, 264 F.2d at 900). Second, to the extent that a determination of indefiniteness as to a means-plus-function limitation may be viewed as predicated upon "a determination of policy or judgment which the agency alone is authorized to make," the Board made such determination here. *Cf. Chenery*, 318 U.S. at 88 (stating "[i]f an order is valid only as a determination of policy or judgment which the agency alone is authorized to make *and which it has not made*, a judicial judgment cannot be made to do service for an administrative judgment." (emphasis added)). Here, the Board expressly found that "Figure 8 . . . does not describe any structure," *Decision on Rehearing* at 4, and that "[t]here is no structure or algorithm for generating transfer data disclosed in the discussion of Figure 8 at Specification paragraphs[] 0088-93," *Initial Decision* at 6.

The nature of the Board's error, as explained above, was in its construction of the means-plus-function limitation in claims 11 and 21. The Board first looked to the portion of the specification that was clearly linked to the claimed function. Finding no structure disclosed therein, the Board scoured the specification in search of any implied structure, regardless of whether the structure found was linked to the claimed function of the means-plus-function limitation. *Decision on Rehearing* at 3. The Office argues that this approach "gave [Mitsui] the benefit of any doubt regarding the definiteness of his means-plus-function claims." *Appellee's Br.* 21. This court fails to see any "benefit" flowing to Mitsui from the Board's improper construction of Mitsui's means-plus-function claims. Rather than making the proper rejection under 35 U.S.C. § 112 ¶ 2, the Board instead construed Mitsui's structure to be "open ended" and satisfied by "any combination of hardware and/or software programmed to perform this [open ended] functionality." *Decision on Rehearing* at 3; *Initial Decision* at 6. The Office notes that, under current guidance, "an Examiner faced with [Mitsui]'s claims might well reject them as indefinite." *Appellee's Br.* 22 n.6, and that either way "[Mitsui] will have to amend [its] claims." *Id.* at 22.

Ordinarily, if this court were to simply affirm the Board's rejections, Mitsui would not be permitted to amend its claims. Manual of Patent Examining Procedure § 1216.01 ("If all claims in the case stand rejected . . . it is ordinarily not open to subsequent amendment and prosecution by the applicant. However, exceptions may occur where the mandate clearly indicates that further action in the [Office] is to be taken in accordance with the Federal Circuit's opinion." (citations omitted)). Of course, if the Board had issued a § 112 ¶ 2 rejection in the first instance, Mitsui would have had the opportunity to amend its claims or to submit new evidence rebutting the new ground of rejection under 37

C.F.R. § 41.50(b) ("The new ground of rejection is binding upon the examiner unless an amendment or new evidence not previously of record is made which, in the opinion of the examiner, overcomes the new ground of rejection stated in the decision."). This court therefore affords Mitsui the same protections as it would have had before the Board with respect to the rejected claims. *See Comiskey*, 554 F.3d at 981-82; *see also* 35 U.S.C. § 144 (stating that this court's mandate shall govern further proceedings before the Office).

III. CONCLUSION

For the foregoing reasons, this court affirms the Board's rejections of claims 11 and 21 albeit on the alternative ground of failure to satisfy the definiteness requirement of 35 U.S.C. § 112 ¶ 2. Moreover, this court remands with instructions to afford Mitsui the same protections under 37 C.F.R. § 41.50(b) as it would have enjoyed had the Board made the proper rejection in the first instance.

AFFIRMED AND REMANDED

COSTS

Each party shall bear its own costs.

United States Court of Appeals for the Federal Circuit

IN RE KEISUKE AOYAMA, KOJIRO TOYOSHIMA, AND YOSHITAKA EZAKI

2010-1552
(Serial No. 10/798.505)

Appeal from the United States Patent and Trademark Office, Board of Patent Appeals and Interferences.

NEWMAN, *Circuit Judge*, dissenting.

On this appeal from a PTO rejection, the court has applied a new ground of rejection—which the court calls "indefiniteness"—and issued a final judgment on that ground, although the applicant has had no opportunity to respond to the rejection. The panel majority's *ab initio* decision is improper, for the Federal Circuit has issued a final judgment on an issue that was not decided by the Board, contrary to 35 U.S.C. §144, which authorizes the Federal Circuit to "review the decision from which an appeal is taken on the record."

The PTO had based its judgment of unpatentability on "anticipation," a ground on which my colleagues announce they shall remain silent, although it is the only issue on appeal, as required by *Securities & Exchange Commission v. Chenery Corporation*, 318 U.S. 80, 94 (1943) ("The grounds

upon which an administrative action must be judged are those upon which the record discloses that its action was based."); *Securities & Exchange Commission v. Chenery Corporation*, 332 U.S. 194, 196 (1947) ("[A] reviewing court, in dealing with a determination or judgment which an administrative agency alone is authorized to make, must judge the propriety of such action solely by the grounds invoked by the agency."). Although the court remands to the PTO, in order the give the applicant the opportunity (indeed the right) to amend the claims or submit new evidence in light of the rejection, the applicant has had no opportunity to argue the merits of the definiteness rejection; the Federal Circuit's judgment is final and binds the Board on remand. Thus the applicant cannot argue, or submit evidence to show that a person of ordinary skill in computer programming would not find the claims indefinite. While the court cites 37 C.F.R. §41.50(b), which instructs the Board to remand after it raises a new ground of rejection, this court has finally decided that the claims as written are unpatentable on this ground, placing a heavy appellate thumb on the scale of remand. Remanding, as here, to the Board to allow the applicant to conform to the court's adverse final judgment on indefiniteness is far different from remanding to the Board to consider claim definiteness in the first instance. I must, respectfully, dissent.

DISCUSSION

The patent examiner, affirmed by the Board of Patent Appeals and Interferences, rejected the application claims on the ground of "anticipation" by a reference to Yang. The examiner stated that "[t]he structure corresponding to the reverse logistics means for transferring is a computer implemented with software. Therefore, any working computer (such as that disclosed in Yang) anticipates the structure corresponding to the means for transferring." Final Office

Action of February 21, 2006, at 2. Aoyama argues, correctly, that this ruling contradicts precedent, for "any working computer" is not a programmed special purpose computer as the specification contemplated. *See, e.g., WMS Gaming, Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1349 (Fed. Cir. 1999) ("In a means-plus-function claim in which the disclosed structure is a computer, or microprocessor, programmed to carry out an algorithm, the disclosed structure is not the general purpose computer, but rather the special purpose computer programmed to perform the disclosed algorithm."); *Harris Corp. v. Ericsson Inc.*, 417 F.3d 1241, 1253 (Fed. Cir. 2005) ("A computer-implemented means-plus-function term is limited to the corresponding structure disclosed in the specification and equivalents thereof, and the corresponding structure is the algorithm."). The PTO's ruling of "anticipation" on this ground is the only issue on this appeal; there was no rejection on the ground of claim indefiniteness.

On appeal Aoyama argues that the structure shown in the specification avoids "anticipation" of the means-plus-function term "reverse logistics means." The PTO states that the Board correctly "refused to read limitations from Figure 8 into the claims." PTO Brief 9. The PTO takes the irregular position that, contrary to the statutory requirements of §112 ¶6,[1] the structure in the specification cannot avert anticipation of the "means" term in the claim. Thus the Board deemed the claim to be "anticipated" by any general purpose computer, stating that the Aoyama specification "does not describe any structure that would alter a general purpose computer into a special purpose computer."

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[1] 35 U.S.C. §112 ¶6: An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

Ex parte Aoyama, No. 2009-6755, at 4 (B.P.A.I. June 16, 2010) (Decision on Rehearing). That is incorrect, for a term in means-plus-function form is construed in accordance with §112 ¶6, and requires examination in those terms.

My colleagues reject the claims, for the first time, on the ground of "indefiniteness," deeming the specification's Figure 8 flow chart and descriptive text inadequate to define the claimed subject matter. Figure 8 is "a flowchart of a method for reverse logistics in accordance with an exemplary embodiment of the present invention," and is presented in routine format and detail:

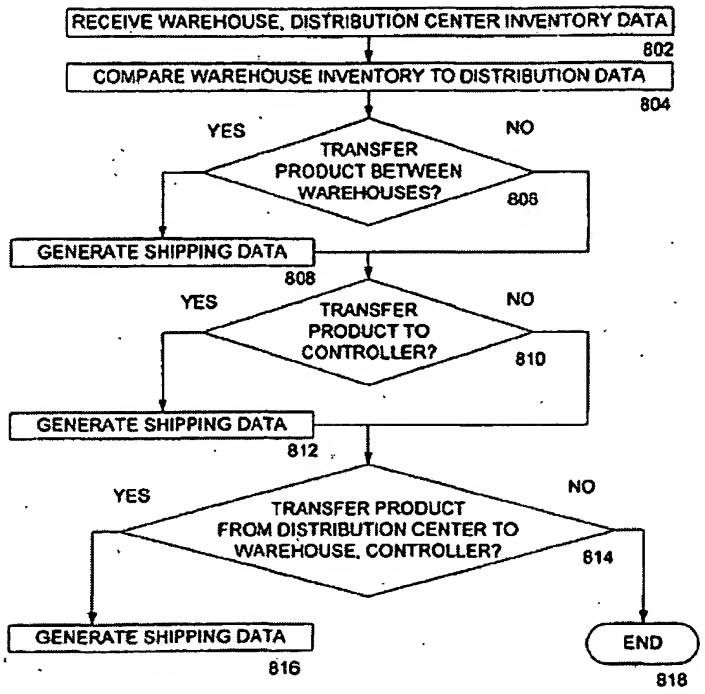

FIGURE 8 800

The specification includes a lengthy description of Figure 8, including:

> Method 800 allows an order controller and a supply chain management system to use reverse logistics to optimize the cost of goods, shipping costs, to accommodate promotions, product rollout, product deletions, product replacements, or to perform other suitable functions.

Application at 0088. The specification describes the several elements of the claims, and states that they

> can be implemented in hardware, software, or a suitable combination of hardware and software, and each of which can be one or more software systems operating on separate general purpose processing platforms. As used herein, a hardware system can include discrete semiconductor devices, an application-specific integrated circuit, a field programmable gate array or other suitable devices. A software system can include one or more objects, agents, threads, lines of code, subroutines, separate software applications, user-readable (source) code, machine-readable (object) code, two or more lines of code in corresponding software applications, databases, or other suitable software architectures.

Id. at 0019. The specification further describes Figure 8 with reference to the claimed method, starting with the receipt of inventory data:

> Method 800 begins at 802 where warehouse and distribution center inventory data are received. In one exemplary embodiment, warehouse data can include actual or implied inventory levels, inventory

> minimum and maximum levels, and other suitable data. Distribution center inventory data can include available short-term inventory space data, actual inventory data, implied inventory data, or other suitable data. The method then proceeds to 804.

Id. at 0089. Additional text referring to Figure 8 explains that the determination whether to transfer a product between warehouses, a controller, or a distribution center is based on parameters such as space and cost savings:

> At 804 warehouse inventory data and distribution inventory data is compared. The method then proceeds to 806 where it is determined whether it is necessary to transfer a product between warehouses. In one exemplary embodiment, the transfer of product between warehouses can be performed in order to increase warehouse space at a first warehouse to accommodate a larger shipment than would be able to be accommodated, so as to realize cost savings for the cost of the product. In another exemplary embodiment, product can be transferred between warehouses to accommodate product rollout, product deletion, product replacement, or other suitable functions. If it is determined at 806 that product transfer between warehouses is not required the method proceeds to 810. Otherwise, the method proceeds to 808 where shipping data is generated and transmitted to an appropriate location, such as a warehouse, a shipper, or other suitable locations. The method then proceeds to 810.
>
> At 810 it is determined whether the product needs to be transferred to a controller. In one exemplary embodiment, the operator of the order controller can also include warehouse space that is under the operator's control, so decisions can be

> made to transfer goods to the operator to realize lower cost of goods shipped or stored at the warehouse, or based on other suitable factors. If it is determined at 810 that product should be transferred to or from the product controller, the method then proceeds to 814. Otherwise, the method proceeds to 812 where shipping data is generated and transmitted to the affected parties. The method then proceeds to 814.
>
> At 814 it is determined whether products should be transferred to a distribution center. In one exemplary embodiment, temporary storage at a distribution center can be used to relieve storage limitations at a warehouse, at the product controller, or in other suitable locations. If it is determined that the product should not be transferred to the distribution center, the method proceeds to 818 and terminates. Otherwise, the method proceeds to 816 and shipping data is generated and transmitted to appropriate parties.

Id. at 0090 to 0092. It is unclear how the panel majority concludes that the specification renders the claims "indefinite" as a matter of law, for this form and content of flow chart and text are in accordance with the established protocols for describing computer-implemented processes. At a minimum, if my colleagues believe that this new ground of rejection is likely to be warranted, the application should be remanded to the PTO for interactive examination on this new ground.

The Board found the claims "anticipated," and although my colleagues acknowledge that "a claim cannot be both indefinite and anticipated," *Enzo Biochem, Inc. v. Applera Corp.*, 599 F.3d 1325, 1332 (Fed. Cir. 2010), my colleagues resolve this conflict by declining to discuss it, stating that

they "do[] not reach the ground relied on by the Board," Maj. Op. at 10, defying the requirements for appellate review of agency action. *See Chenery*, 318 U.S. at 94 ("[A]n administrative order cannot be upheld unless the grounds upon which the agency acted in exercising its powers were those upon which its action can be sustained."); *Chenery*, 332 U.S. at 196 ("If those grounds are inadequate or improper, the court is powerless to affirm the administrative action by substituting what it considers to be a more adequate or proper basis."); *Bowman Transp., Inc. v. Arkansas-Best Freight Sys., Inc.*, 419 U.S. 281, 285-86 (1974) (courts "may not supply a reasoned basis for the agency's action that the agency itself has not given").

The mode of describing computer-implemented methods in patent specifications is standardized, and the presentation herein is in routine accordance with established protocols. The court has remarked that the requisite detail does not set "a lofty standard." *Finisar Corp. v. DirecTV Group, Inc.*, 523 F.3d 1323, 1340-41 (Fed. Cir. 2008) ("minimal disclosure" of the programmatic detail of computer-implemented methods). "[T]he sufficiency of the disclosure of algorithmic structure must be judged in light of what one of ordinary skill in the art would understand the disclosure to impart." *Aristocrat Techs. Australia Pty Ltd. v. Int'l Game Tech.*, 521 F.3d 1328, 1337 (Fed. Cir. 2008).

In *AllVoice Computing PLC v. Nuance Communications, Inc.*, 504 F.3d 1236 (Fed. Cir. 2007) the court explained that a flow chart can provide the structure for a means-plus-function claim. My colleagues indeed find that "[t]he only portion of the specification linked to [the claimed] function, and the only portion of the specification that Mitsui contends describes the corresponding structure, is the flowchart of Figure 8 and the description thereof in the specification," Maj. Op. at 7, but also curiously find that "the particular

flowchart of Figure 8 and its accompanying description fail to provide any structure or algorithm whatsoever." Maj. Op. at 8-9.

The majority opinion does not address whether a person of ordinary skill in computer programming would understand Figure 8 and the descriptive text as a structural algorithm that could be routinely programmed to perform the function of generating transfer data. *See Aristocrat*, 521 F.3d at 1337 ("[T]he proper inquiry for purposes of section 112 paragraph 6 analysis is to look at the *disclosure* of the patent and determine if one of skill in the art would have understood that *disclosure* to encompass software to perform the function and been able to implement such a program." (internal quotation marks omitted)); *see also Med. Instrumentation & Diagnostics Corp. v. Elekta AB*, 344 F.3d 1205, 1214 (Fed. Cir. 2003) ("[H]ere there would be no need for a disclosure of the specific program code if software were linked to the converting function and one skilled in the art would know the kind of program to use.").

Aoyama has had no opportunity to develop a record on this aspect, for it was not raised during examination, and was not a ground of rejection by the Board. In *Biomedino, LLC v. Waters Technologies Corporation*, 490 F.3d 946, 950 (Fed. Cir. 2007) the court stated that "[w]hile the specification must contain structure linked to claimed means, this is not a high bar." Our appellate role is not to raise the bar, but to apply it, predictably and reliably. There have indeed been situations in which the description in the specification was inadequate to support the claimed function. *See, e.g., Net MoneyIN, Inc. v. Verisign, Inc.*, 545 F.3d 1359 (Fed. Cir. 2008) (the words "bank computer" without more are insufficient to constitute an algorithm for "means for generating an authorization indicia"); *Finisar*, 523 F.3d at 1323 (the word "software" without more is not sufficient as an algo-

rithm for "database editing means"). However, "algorithms in the specification need only disclose adequate defining structure to render the bounds of the claim understandable to one of ordinary skill in the art." *Allvoice*, 504 F.3d at 1245. Precedent does not require a "highly detailed description of the algorithm to be used to achieve the claimed functions in order to satisfy 35 U.S.C. §112 ¶6," *Aristocrat*, 521 F.3d at 1338, for "knowledge of one skilled in the art can be called upon to flesh out a particular structural reference in the specification for the purpose of satisfying the statutory requirement of definiteness." *Creo Prods., Inc. v. Presstek, Inc.*, 305 F.3d 1337, 1347 (Fed. Cir. 2002).

Computer-implemented innovation has generated a well-established protocol that takes cognizance of the characteristics of computer technology and the general state of knowledge of persons experienced in this field, and thus "permits a patentee to express [the] algorithm in any understandable terms including as a mathematical formula, in prose, or as a flow chart, or in any other manner that provides sufficient structure." *Finisar*, 523 F.3d at 1340. Precedent contains many examples of descriptions, figures, flow charts, and text, indistinguishable in form and content from those herein. *See, e.g., Overhead Door Corp. v. Chamberlain Group, Inc.*, 194 F.3d 1261, 1271-72 (Fed. Cir. 1999) (Figure 3 and its accompanying description provided the structure for a "memory selection second switch means"); *Allvoice*, 504 F.3d at 1245 (the patent's figures and accompanying description were "sufficient algorithmic structure" for means-plus-function claims); *WMS Gaming*, 184 F.3d at 1349 (Figure 6 and the descriptive text provided the "structure" for the "means for assigning"). In no case was computer code included in the patent specification; neither machine code nor source code is required to provide structure to a description of the claim function. *Aristocrat*, 521 F.3d at 1338.

The standard of whether the disclosure is sufficiently "definite" is whether a person of ordinary skill could program the computer to perform the stated function based on that disclosure. *See Telcordia Techs., Inc. v. Cisco Sys., Inc.*, 612 F.3d 1365, 1377 (Fed. Cir. 2010) ("[C]laim definiteness depends on the skill level of an ordinary artisan"). My colleagues do not find that this standard is not here met. Instead, the court draws a new and undefined distinction of "high level process flow," Maj. Op. at 9, changing the rules for computer-implemented inventions. In *Atmel Corporation v. Information Storage Devices, Inc.*, 198 F.3d 1374, 1382 (Fed. Cir. 1999), the court stated that "[t]he requirement of specific structure in §112, ¶6 thus does not raise the specter of an unending disclosure of what everyone in the field knows." Any change in the practice of how computer-implemented methods are required to be presented in patent specifications has wide impact. No basis for such a change is here shown. I must, respectfully, dissent from the changed law, and from the court's appellate procedure that deprives the applicant of the opportunity to contest this new and procedurally final ground of rejection.